



# CITY OF NORTHAMPTON

## Flood Control and Stormwater Utility



December 2013

# Tonight We'll Cover...

- Flood Control & Drainage Overview
- New EPA and Army Corps Requirements
- Need for Funding / Task Force Work
- Proposed Ordinance being Considered
- Sample Bills

# Pleasant Street Flood of 1936

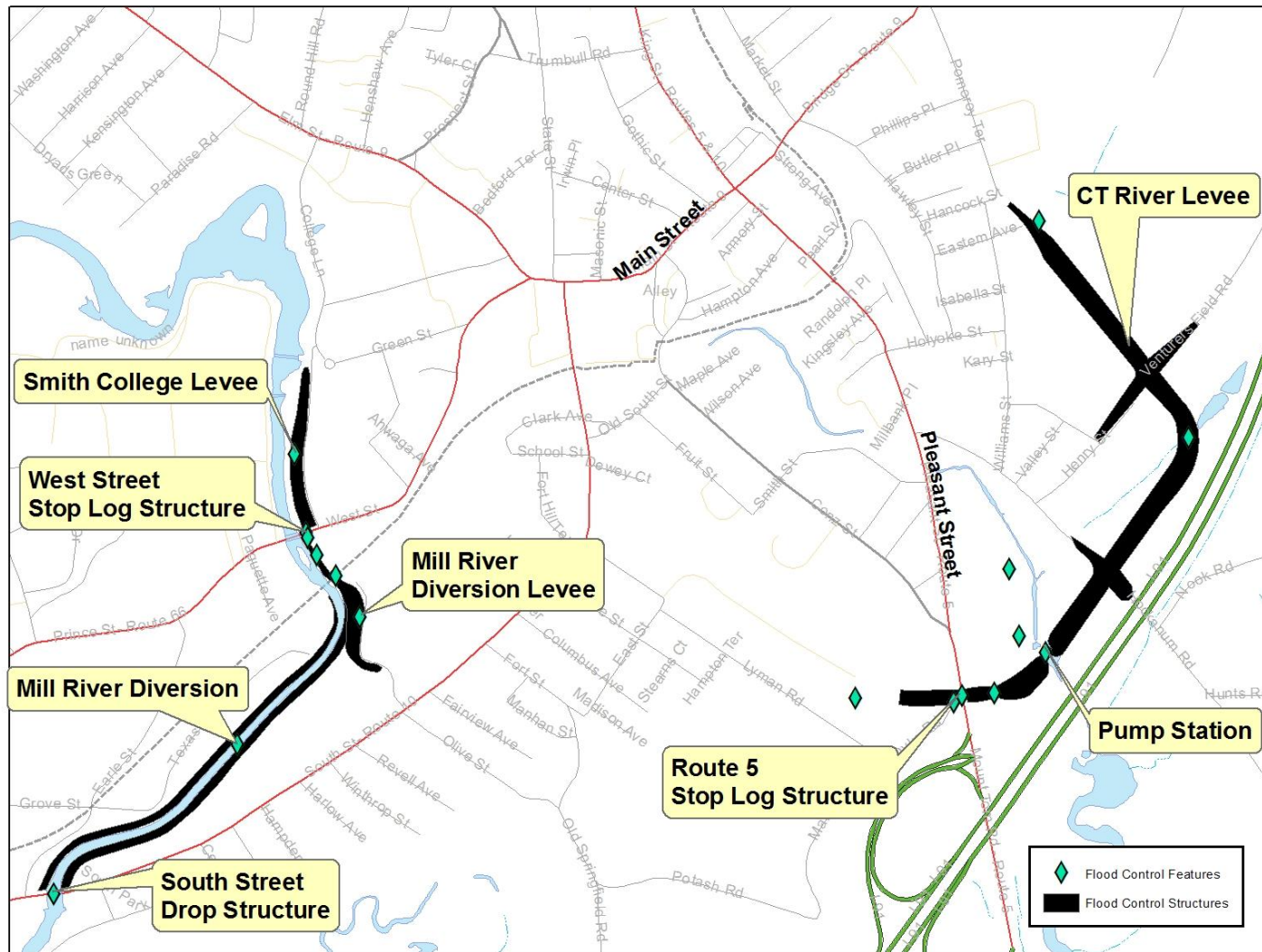




# Downtown Underpass Flood of 1936

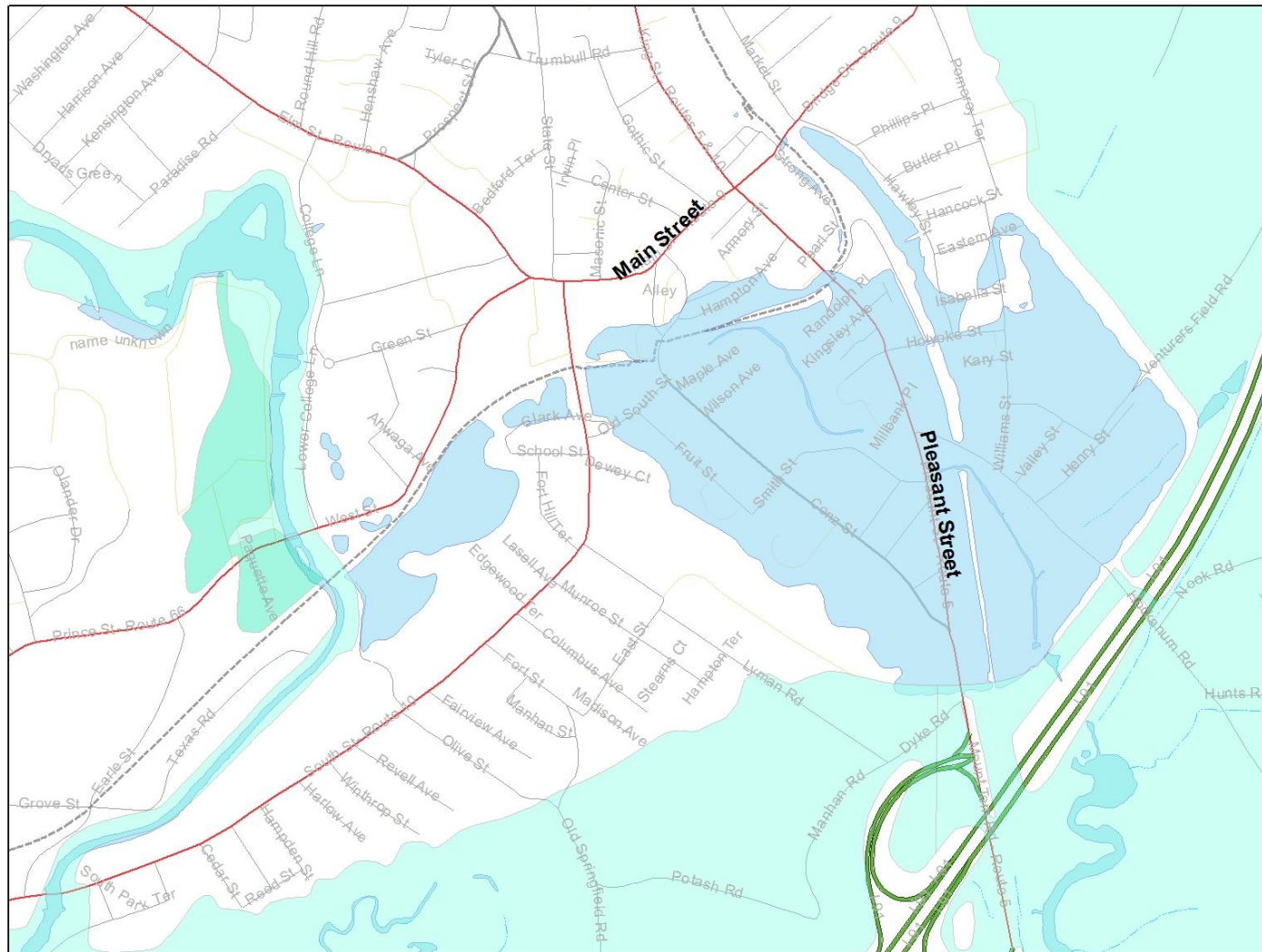


# Northampton Flood Control Structures

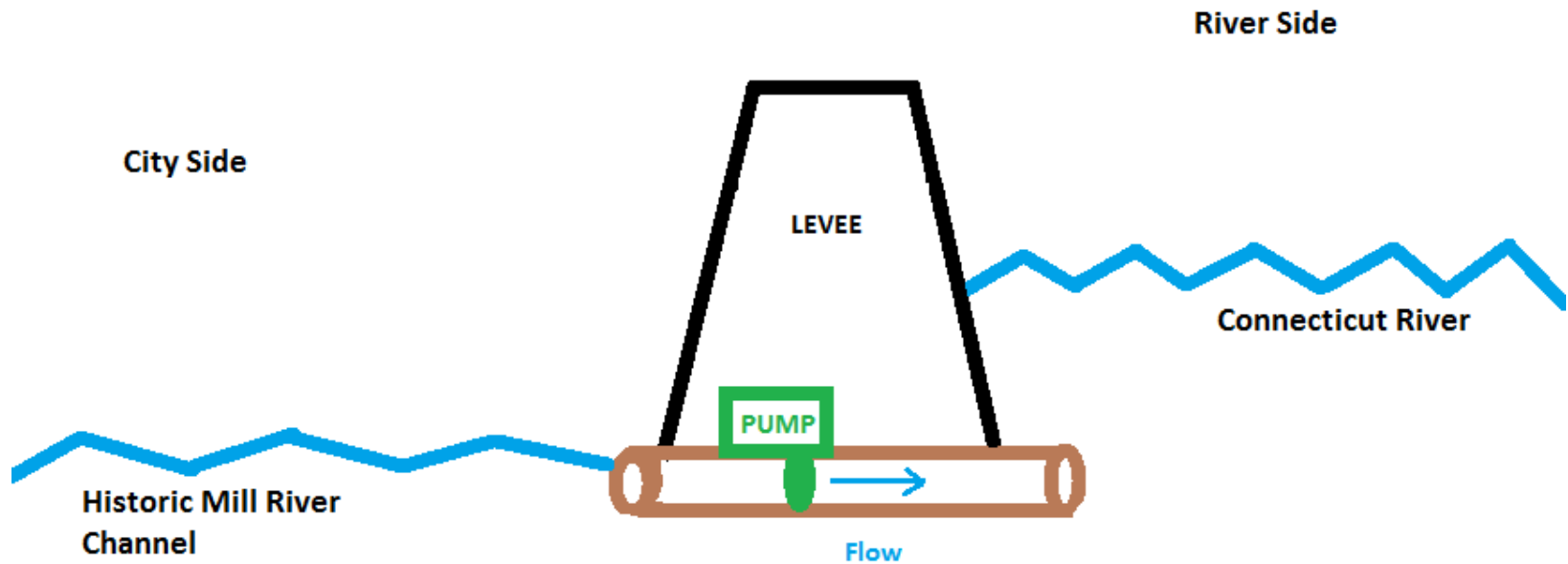




# Northampton Flooding at Elevation 127' with no Flood Control System



# Flood Control Pump Station at Flood Stage



# Flood Control System Needs

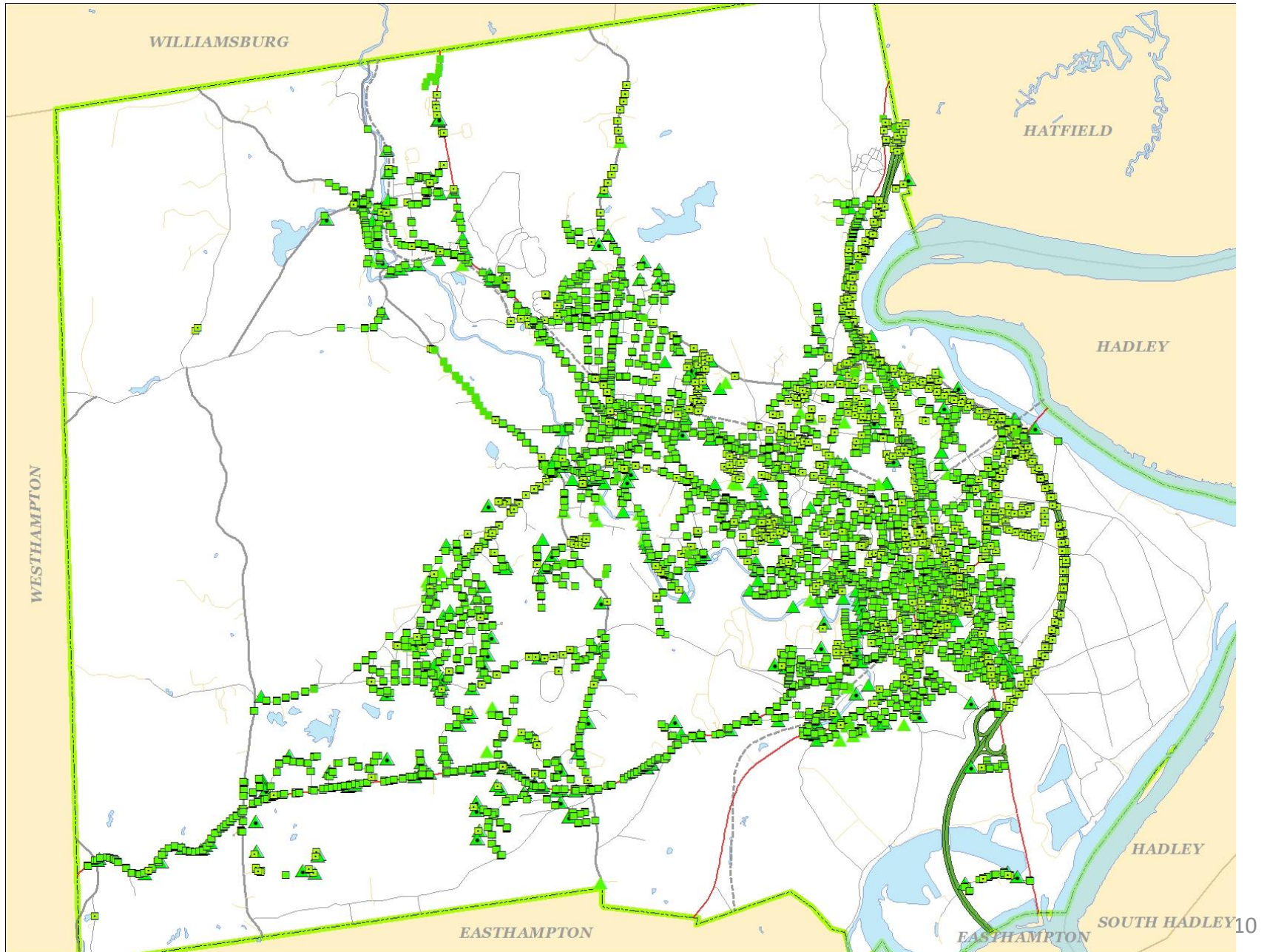
1. Army Corps requires maintenance improvements for Mill River and Connecticut River systems by 2014
2. Engineering studies required include seismic, hydraulics, stability and settlement, topographic surveys and geotechnical borings
3. Upgrade or Replace the flood control pump station
  - Estimated cost is about \$1,200,000 for levee engineering and maintenance construction
  - Additional \$\$ to repair levee and pump station deficiencies



# Aging Stormwater Infrastructure

- Portions of drainage system are over 100 years old
- Drainage system is under capacity in some areas
- Some City areas don't have drainage systems and need improvements
- Limited funds for replacing/repairing/constructing

4,835 Catch Basins, 114 Miles of Pipe, 326 Outfalls, and 190 Culverts





## **Florence Street**

Stormwater drainage pipe – emergency repair by Public Works personnel.





## **Prospect Street Culvert Collapse 2004**

Emergency Repair costing \$29,000



# Drainage Repairs & Improvements

North Street 2012



Reservoir Road 2009



Conz Street 2011



Locust Street 2006



# New EPA Stormwater Permit

- EPA permit regulates City stormwater discharges to Brooks and Streams
- New permit expected in 2014
- The new EPA permit will increase costs
  - increased catch basin cleaning and street sweeping
  - outfall sampling
  - public education
  - nitrogen reduction
  - “green infrastructure” drainage improvements, and other...

# March 7, 2013 City Council Order

1. Created a Stormwater Ad-Hoc Advisory Task Force – 12 members
  - 9 members appointed by City Councilors
  - 1 Chamber of Commerce representative
  - 1 Board of Public Works member
  - 1 non-profit representative
2. March 7-June 20, 2013 – 12 total meetings

# Stormwater Ad-Hoc Advisory Task Force

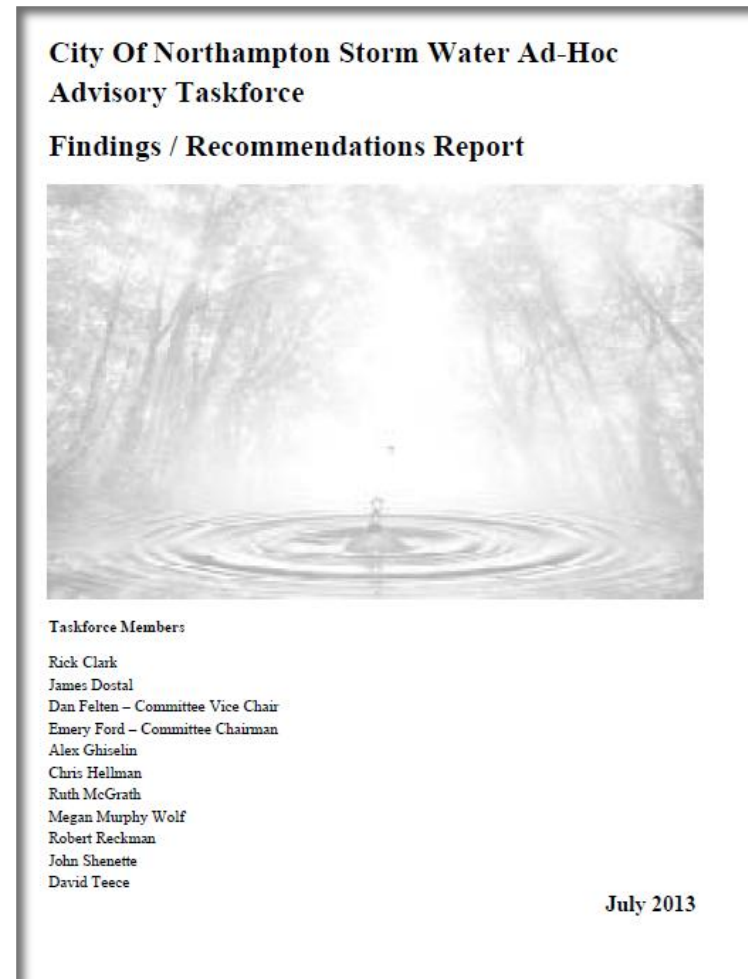
Examined ways in which the stormwater and flood control costs, about \$2 million, could be funded:

1. General Fund – (Current Method)
2. Use Override(s)
3. Create a new Stormwater and Flood Control Fee
4. Combination of General Fund and Fee



# Task Force Funding Recommendations (July 2013)

1. Create a Stormwater and Flood Control Fee
2. Suggested two possible formulas
3. Recommended offering credits and incentives



# August 15, 2013 City Council Order

1. Task Force Report was accepted
2. Asked the BPW consider this report and to draft of a proposal for an ordinance
3. BPW used 2 subcommittees: fee formula review; credit system
4. BPW public presentation Sept 18, 2013 for public input

# Draft Ordinance

1. Billing Formula based on runoff coefficients:
  - Impervious surface area = 0.95
  - Pervious surface area = 0.1
2. Bills for 1-3 Family Homes based on average impervious and pervious areas
3. 3 billing tiers for residential property
4. Bills for all other properties based on actual impervious area and pervious area on each property
5. Cap of 1 acre for pervious area
6. Maximum Budget \$2 Million per year

# Residential Bills

Impervious Areas  
and Pervious  
Areas Averaged  
for each  
Residential Tier to  
Determine Bill

Annual Residential  
Fees:

Tier 1: **\$61**

Tier 2: **\$97**

Tier 3: **\$233**





# Example Non-Residential Bill

Impervious  
Area at  
Cooley  
Dickinson  
Hospital



# Example: Cooley Dickinson Hospital

Impervious Area:  $685,305 \text{ sf} \times 0.95 = 651,040 \text{ sf}$

Pervious Area:  $1,161,581 \text{ sf (cap 1 acre)} =$   
 $43,560 \text{ sf} \times 0.1 = 4,356 \text{ sf}$

Total:  $651,040 \text{ sf} + 4,356 \text{ sf} = 655,396 \text{ sf}$  (hydraulic acreage)

$655,396 \text{ sf} \times 0.02366 \text{ (rate)} = \$15,507$

# Proposed Credits & Incentives

## Incentives

- Discount on purchase of Rain Barrels

## Credits Being Considered

- Residential one time credit for construction of rain gardens and porous driveways
- Stormwater system maintenance and performance credits for commercial and other properties
- Senior and Low Income Credits
- Protected Land Credits for agriculture, forestry, and other open space with restrictions in place
- Education Credit for private and public education institutions

# Proposed Exemptions

Open land with a permanent restriction  
would not get a bill:

1. Conservation Restriction (CR)
2. Agricultural Preservation Restriction (APR)



# Proposed Process to Appeal a Bill

1. A property owner could appeal a bill or credit to the Director of Public Works
2. Bills that remain unresolved could be brought to the Board of Public Works - Claims Committee for review and consideration

# Sample Annual Stormwater Bills

DRAFT, Northampton DPW, 11/25/2013

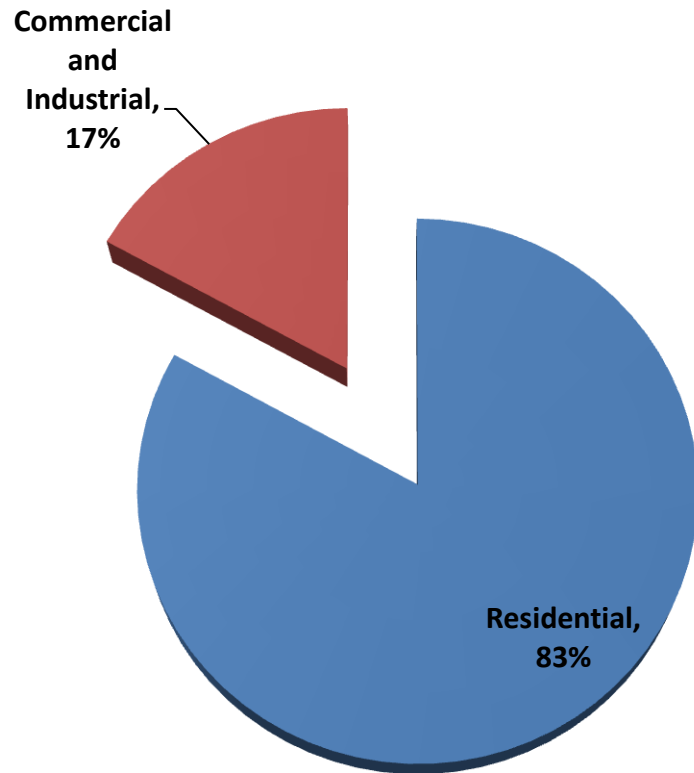
Properties	Impervious Area (SF) <sup>1</sup>	Pervious Area (SF) <sup>1</sup>	Sample Bills <sup>2</sup>
<b>1, 2 &amp; 3 Family Houses (average areas by tiers)</b>			
Less than 2,000 sf impervious area (1,611 properties)	1,540	11,209	\$61
2,000 sf to less than 4,000 sf impervious area (3,231 properties)	2,853	14,037	\$97
4,000 sf and greater impervious area (1,774 properties)	7,680	25,330	\$233
<b>Example Properties:</b>			
Undeveloped Land (1 acres)	-	43,560	\$103
Undeveloped Land (10 acres)	-	435,600	\$103
Undeveloped Land (50 acres)	-	2,178,000	\$103
Arcadia (1 of 10 parcels)	16,075	14,688,422	\$464
1-Family Property (19.2 acre lot)	3,218	834,363	\$97
Paradise Copies-21 Conz St	11,853	2,661	\$273
Coopers, 35 Main St, Forence	16,550	4,669	\$383
CVS, 366 King St	63,734	30,181	\$1,504
Hotel Northampton, 36 King St & 43 Gothic St	77,835	1,495	\$1,753
221 Pine Street	79,838	63,299	\$1,898
Clarion Hotel & Conference Center, 23 Atwood Dr	190,319	143,509	\$4,381
Lia Toyota, 246-280 King St	233,375	68,099	\$5,349
River Run Condominiums, Damon Rd	242,688	479,131	\$5,558
L-3 KEO, 50 Prince St	265,805	325,611	\$6,078
Hathaway Farms, Barrett St (207 Apartments)	380,421	414,427	\$8,654
Walmart, 180 North King St	423,020	87,505	\$9,611
Coca-Cola, 45 Industrial Dr	756,582	152,341	\$17,109
Cooley Dickinson Hospital	685,305	1,161,581	\$15,507
Three County Fairgrounds	842,349	1,139,281	\$19,037
VA Medical Center, 421 North Main St	1,099,758	3,448,442	\$24,822
Smith College	2,764,872	5,157,630	\$62,249

<sup>1</sup>Estimated areas based on 2005 MassGIS Impervious information, 2011 MassGIS Building Information, and 2012 MassGIS Level 3 parcel data

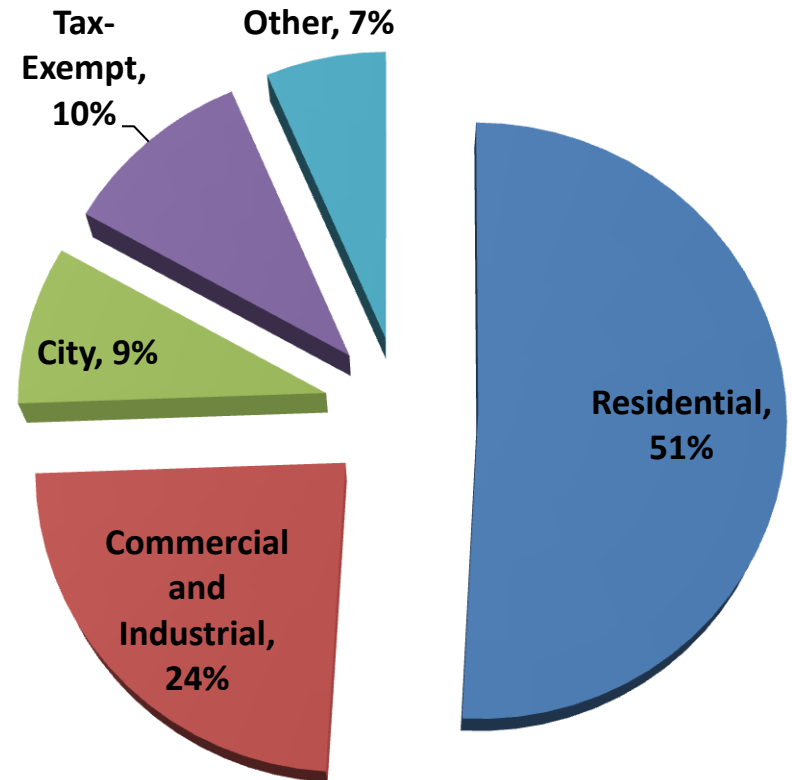
<sup>2</sup>Runoff Coefficients: Impervious = 0.95, Pervious = 0.1

# Comparison of Proposed Revenue from Stormwater Fee vs. Property Tax

**Current Property Tax**



**Proposed Stormwater & Flood Control Utility Revenue**



# Public Process – Moving Forward

1. The draft ordinance was submitted to the City Council October 3, 2013
2. The Council referred the draft ordinance to Council subcommittees
3. The City Council is holding Ward meetings
4. Full City Council deliberation and vote



# For More Information

- Web Site: [www.northamptonma.gov](http://www.northamptonma.gov)
- Detailed Questions:
  - Department of Public Works
  - 125 Locust Street
  - 587-1570
  - Attention: James R. Laurila, P.E., City Engineer
- Check City Calendar for City Council Meeting Schedule